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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/707,886	11/08/2000	Lawrence R. Andrews	3700-2	9840

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EXAMINER

LUK, EMMANUEL S

ART UNIT PAPER NUMBER

1722

DATE MAILED: 04/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/707,886

Applicant(s)

ANDREWS, LAWRENCE R.

Examiner

Emmanuel S. Luk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-28 is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are indefinite since it is unclear how the claimed relation between the first and second structure are formed in relation to the mold parts and moveable mold part. The claims are unclear with the structural relations between the mold parts.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5 and 9-11 rejected under 35 U.S.C. 102(b) as being anticipated by Zakich (5091124).

Zakich teaches the mold having a moveable mold part (22), a fixed mold part (12), a guide mechanism comprising a first structure (24) and second structure (13), the first structure sandwiching the second structure (Fig. 1), a plurality of bearings (28) separating the structures, the mold movement path is a linear mold movement path (Fig. 1 and 2), means (16, 46) for moving the moveable mold part into mold forming

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position and means (16, 46) for returning the moveable mold part away from the position and an additional moving structure (26a,26b).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 6-8, 12, 14, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zakich (5091124) in view of Ueno (4984980).

Zakich teaches the mold having a moveable mold part (22), a fixed mold part (12), a guide mechanism comprising a first structure (24) and second structure (13), the first structure sandwiching the second structure (Fig. 1), a plurality of bearings (28) separating the structures, the mold movement path is a linear mold movement path (Fig. 1 and 2), means (16, 46) for moving the moveable mold part into mold forming

position and means (16, 46) for returning the moveable mold part away from the position.

Zakich fails to teach a cam surface, a return spring, ball bearings, injection blow molding and upper and lower bearing races.

Zakich teaches a piston that is in conjunction with the moveable mold part via the second structure and biases the mold part into and out of the mold forming position. The piston end that contacts the second structure is the cam surface and is planar. The shape of the cam surface is a design choice and can be curved in shape as it is merely a change in shape. The piston also has the equivalent function as the spring in biasing the upper mold part away from the mold forming position.

Ueno teaches a mold clamping apparatus having a frame with a moveable and fixed mold parts (20, 9), the first structure (23) sandwiching a second structure (10) and ball bearings (22) that having corresponding bearing races formed (Fig. 4).

It would have been obvious to one of ordinary skill in the art to modify Zakich with bearing races and a plurality of ball bearings as taught by Ueno because it allows for improved movement between the first and second structures and thus improved movement of the moveable mold towards and away from the fixed mold.

Response to Arguments

7. Applicant's arguments, see Appeal Brief, filed 1/20/2004, with respect to the rejection(s) of claim(s) 1-13 under Talasz have been fully considered and are

persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Zakich (5091124).

Allowable Subject Matter

8. The indicated allowability of claims 14-17 is withdrawn in view of the newly discovered reference(s) to Zakich (5091124).

9. Claims 13 and 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. Claims 18-28 are allowed.

11. The following is an examiner's statement of reasons for allowance: The prior art of record fails to teach an upper mold, lower mold and an end plug, a guide mechanism for guiding the end plug into and out of a mold forming position along the mold movement path in conjunction with one of the mold halves, first and second structure fixed to the mold parts, the first structure sandwiching the second structure and a plurality of bearings separating the first and second structures permitting movement along the mold movement path wherein said one of the first and second structures applies a preload pressure to the bearings in at least one direction normal to the mold movement path. The closest prior art, Talasz, fails to teach the first structure fixed to

one mold part and a second structure fixed to another mold part and at least a portion of the first and second structures sandwiching one another.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Drawings

12. New corrected drawings are required in this application because the drawings appear to be informal copies, and in particular the reference numbers appear to have been handwritten and thereby lacking uniform legibility. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Conclusion


13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel S. Luk whose telephone number is (571) 272-1134. The examiner can normally be reached on Monday-Thursday 7 to 4 and alternate Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on (571) 272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EL


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